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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,276	08/07/2006	Saurabh S. Lawate	3212-01	3599

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EXAMINER	
METZMAIER, DANIEL S	

ART UNIT	PAPER NUMBER
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/544,276	LAWATE ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 August 2005 & 07 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/03/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-23 are pending.

Specification

1. Applicant is reminded of the proper content of an Abstract of the Disclosure.

In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, *e.g.*, "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

Complete revision of the content of the abstract is required on a separate sheet.

2. The use of trademarks has been noted in this application, e.g., see Table setting forth Recipe 1, IRGANOX L135, POLYGLYCOL 2000, etc.. They should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

3. It is further suggested that if applicants intend on referencing the PCT Application in the Cross Reference section that "claims priority from" be replaced with, is a National Stage Application filed under 37 U.S.C. 371 based on , to make clear a priority claim under 35 U.S.C. 120 is NOT being made.

Claim Objections

4. Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

dependent form, or rewrite the claim(s) in independent form. Claim 14, which claims: "The composition on claim 1 comprising an antioxidant" does not limit the composition of claim 1, which "is comprising an antioxidant".

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 8, and 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, "the preferred synthetic oil" lacks proper antecedent basis. Furthermore, it is unclear what the metes and bounds are of claim 8 since the preferred synthetic oils are claimed and whether the claim scope is open to all other synthetic oils as well.

In claims 15 and 16, "The lubricant composition" lacks proper antecedent basis.

Furthermore, claim 16 is dependent on itself, *i.e.*, claim 16. It is unclear what previous claim applicants intended to reference in claim 16.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-2, 4-9 and 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Lawate et al, US PGPUB 2006/0020073 A1[1]. Attention is specifically directed to Recipe 1 on page 3 of the publication.

The applied reference has a common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

9. Claims 1-9 and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Geotze et al, US 4,839,970, as evidenced by Dentsply International Inc., WO 99/17716.

Dentsply International Inc is provided as evidence in this anticipation rejection as disclosing the inherent properties of AEROSIL® 380 employed in the Geotze et al reference (examples and column 5, line 51). Dentsply International Inc. sets forth (page 11, penultimate paragraph):

> **Aerosil 380**, available from Degussa is a silica with a BET surface area (as discussed in DIN 53 200) of **380 m^2/g**, a **primary particle size of 7 nm** and 2-3.3 OH groups/nm^2, at 2.7 OH groups/nm^2 this corresponds to 1.7 mmol

[1] US PGPUB 2006/0020073 A1 has an effective date of 01 April 2002.

(millimols) OH/g Aerosil 380. The letter "m" stands for meters. (Emphasis added).

The instant claims read on the Geotze et al compositions based on the characteristics of polypropylene glycol. Initially, (1) the fact that the polypropylene glycol is largely hydrophobic (column 3, lines 8-17), is a fluid (column 4, lines 3-4), and is synthetic fluid clearly having lubricity based on its hydrophobic properties, *i.e.*, polypropylene glycol is a synthetic oil. Secondly, (2) polypropylene glycol is a polyglycol having an average molecular weight of approximately 2000. Thus, the instantly claimed coupling agent reads on the polypropylene glycol of the Geotze et al reference.

Therefore, the instant claims read on the Geotze et al compositions since both instantly claimed components "a" and "d" read on the Geotze et al reference. The polypropylene glycol metes both the claim 1 limitations "a. a synthetic oil of lubricating viscosity" and "d. a coupling agent", which (instant claims 12-13) is defined to include polyglycol having average molecular weight of 2000. Geotze et al (claims 2, 4, 8 and 16) discloses the polypropylene glycol has a molecular weight between approximately 2000 and about 3000.

Geotze et al (claims and examples) discloses filling compositions for optical waveguides comprising 92 to about 50 weight percent of polypropylene glycol; and 8 to about 50 weight percent of finely divided fumed silica. Geotze et al also (claims 3-4) discloses compositions having 99 to about 96 weight percent of polypropylene glycol; and 1 to about 4 weight percent of finely divided fumed silica. Geotze et al also (claims 5) discloses compositions having 99 to about 96 weight percent of polypropylene glycol; and 1 to about 4 weight percent of finely divided fumed silica. Geotze et al also (claims

7-9, 11-16) discloses compositions having 50 to about 99 weight percent of polypropylene glycol; and 1 to about 50 weight percent of finely divided fumed silica.

Geotze et al clearly discloses the concentrations 1 to10, more preferably 2 to 6, % by weight fumed silica in instant claims 6 and 7, respectively. Likewise, Geotze et al clearly discloses the concentrations of "synthetic oil comprises at least 85 % by weight in instant claim 9.

Geotze et al (claims 5-6 and 15) clearly disclose antioxidants including hindered phenols (instant claim 15) and Geotze et al (examples) exemplifies 0.4 % by weight of antioxidant (instant claim 16).

Lastly, Geotze et al (examples and at least claims 9 and 10) disclose employing either hydrophilic or hydrophobic fumed silica (instant claims 2-3). The hydrophilic fumed silica would have been expected to inherently been substantially free of hydrophobic silica (instant claim 3) in the absence of the specific recitation of the combination of hydrophilic and hydrophilic silicas, *e.g.*, Geotze et al, example 2.

10. Claims 1-2, 4 and 6-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Randisi, US 5,037,566.

Randisi '566 (example 1 and claim 1) discloses a stable dispersion of synthetic lubricating fluid (PAO) 84 %, PTFE, amine phosphate (antioxidant and wear inhibitor) 1 %, polybutene 1 %, polypropylene glycol 1 % and hydrophobic fumed silica 10 %.

Randisi '566 (column 3 to 4, lines 59 to 7) discloses the silica having particle size of 7 -40 nm, preferably 12-16 millimicrons (1 nm = 1 millimicron), which is commercially available from Degussa. Randisi '566 exemplifies AEROSIL® R-972

silica from Degussa, which has a specific surface area of about 110 ± 20 m^2/g and a particle size of ~ 16 nm. Randisi '566 (column 4, lines 29-31) discloses the fumed silica is employed at about 2 to 12 % of the lubricating composition. The range of 2-6 % by weight is clearly envisaged in the Randisi '566 reference.

Randisi '566 (column 4, lines 42-53) disclose the phosphates have oxidation-resistant properties, *i.e.*, functions as an antioxidant. Randisi '566 specifically mentions the exemplified IRGALUBE 349 as a particularly useful amine-phosphate.

The polyglycol number average MW of at least 1000 would have been inherent to the polypropylene glycols disclosed in the Randisi '566 compositions as a conventionally available polypropylene glycol.

11. Claims 1-2, 4 and 6-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Randisi, US 5,050,959, as evidenced by Randisi, US 5,037,566.

Randisi '959 (examples and claims) discloses a fiber optic lubricant comprising polybutene, hydrophobic silica, PTFE, amine phosphate and PEG 2025. Amine-phosphate, IRGALUBE 349, functions as an antioxidant (see Randisi '566, column 4, lines 42-53).

Randisi '959 (examples and column 4, lines 19-46) exemplifies AEROSIL® R-972 silica and discloses the silica having particle size of 12-16 nm and a specific surface area of about 110 ± 20 m^2/g, which is commercially available from Degussa.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 1-2, 4 and 6-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Randisi, US 5,037,566, or Randisi, US 5,050,959; in view Levy et al, US 5276,757.

Randisi '566 and Randisi '959 disclose fiber optic lubricant fluids as set forth in the above anticipation rejections and said citations and reasoning are herein incorporated by referent thereto.

Randisi '566 and Randisi '959 differ from the claims, particularly claims 17-21, which require a mixture of polydecene and polybutene and/or the use of hindered phenol antioxidant compounds.

Levy et al (abstract) discloses filing compositions for optical cables comprising hydrophobic fumed silica, a synthetic polyalkylene oil, and a thermal oxidation stabilizer. Levy et al (U.S. PATENT DOCUMENTS) cites Randisi '959 as prior art. Randisi '959 also

(column 5, lines 45-52) clearly contemplates additional additives including antioxidants and additional gelling agent.

Levy et al (column 3, lines 22-53; column 4 to 6, lines 62 to 47; particularly column 5, lines 56-67 and 44-46; and examples) discloses mixtures of polybutene oil with polydecene oil, including ratios of 1 : 1, for the advantages of properties of the oils and filing compositions, reduction of the higher cost polydecenes, processing cost and thickening properties of the polydecene oils.

Levy et al (column 6, lines 56 et seq) teaches hindered phenol antioxidants and (column 7, lines 24-26) concentrations thereof at 0.1-2.0 %, preferably 0.2-1.5 % by weight of the filling composition.

These references are combinable because they teach filing compositions for optical cables employing related components. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ mixtures of polybutene oil with polydecene oil, including ratios of 1 : 1, in the compositions of Randisi '566 and Randisi '959 for the advantages taught in the Levy et al reference.

Furthermore, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hindered phenol antioxidants at concentrations of 0.1-2.0 %, preferably 0.2-1.5 % by weight of the filing compositions in the Randisi '566 and Randisi '959 filing compositions for their art recognized functions as antioxidants.

15. Claims 3, 5, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Randisi, US 5,037,566, or Randisi, US 5,050,959; in view Levy et al,

US 5276,757, as applied to claims 1-2, 4 and 6-21 above, and further in view of Lange et al, US 4,705,571, and as evidenced by Dentsply International Inc., WO 99/17716.

Randisi '566 and Randisi '959 in view Levy et al disclose optical fiber filing compositions as set forth in the above obviousness rejection and said citations and reasoning are herein incorporated by referent thereto.

Randisi '566 and Randisi '959 differ from claim 3 in the use of hydrophobic silica rather than hydrophilic silica and/or in claims 5 and 22-23 in the surface area of said silica. Levy et al differs in the use of from said claims 3, 5 and 22-23 in the use of hydrophobic silica rather than the claimed hydrophilic silica and the surface area of said silica.

Lange et al (abstract and examples) discloses filing compositions for optical cable (light waveguide) comprising polyglycol and/or polyolefin, fumed silica, hydrogen containing silane compound as a cross-linking/coupling agent and an antioxidant.

Lange et al (examples) teaches the use of hydrophilic silica as the sole fumed silica (example 1, AEROSIL 380) and the combination of hydrophilic and hydrophobic silica.

Lange et al further (columns 3 to 4, lines 63 to 8) teaches:

> Typically fumed silica is inherently hydrophilic. In the filling compound of the present invention, especially advantageous results can be achieved when fumed silica is utilized that has been modified to be hydrophobic. This results in the surface tension being modified such that, together with the aforementioned skeleton structure, the gel phase remains fixed and does not drip out even under extreme conditions of long duration. In a further preferred embodiment of the invention both hydrophilic fumed silica as well as fumed silica that has been rendered hydrophobic are utilized. By utilizing hydrophilic fumed silica improved bonding of the fluid phase (matrix) to the fumed silica via a chemical reaction is achieved. (Emphasis added).

Dentsply International Inc is provided as evidence in this rejection as disclosing the inherent properties of AEROSIL® 380 employed in the Lange et al reference (example 1). Dentsply International Inc. sets forth (page 11, penultimate paragraph):

> **Aerosil 380**, available from Degussa is a silica with a BET surface area (as discussed in DIN 53 200) of **380 m^2/g**, a **primary particle size of 7 nm** and 2-3.3 OH groups/nm^2, at 2.7 OH groups/nm^2 this corresponds to 1.7 mmol (millimols) OH/g Aerosil 380. The letter "m" stands for meters. (Emphasis added).

These references are combinable because they teach filing compositions for optical cables employing related components and their properties. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hydrophilic silica with a coupling agent and/or hydrophilic and hydrophobic silica with a coupling agent in the compositions of Randisi '566 and Randisi '959 for the advantages taught in the Lange et al reference of gel strength modification, decreased drip out and improved bonding of the fluid phase (matrix).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel S. Metzmaier/
Primary Examiner, Art Unit 1796

DSM